

e: alicehaynes22@gmail.com
t: 07913 444 024
w: www.alicehaynes.com

alice haynes

about

Imaginative and conscientious in my work, I am looking to apply my dynamic mathematical and artistic abilities to develop innovative solutions that benefit society. With a strong academic background in mathematical engineering, I thrive as part of a multi-talented, enthusiastic team, approaching design challenges with an interdisciplinary and co-creative mindset, from developing a tactile interface to programming swarm behaviour.

education

University of Bristol, UK

2012 - 2016

Masters of Engineering in Engineering Mathematics, First Class Honours, 84/100, Top of Year

A unique course combining abstract and applied mathematics, programming skills, physics, sustainability and AI.

Self proposed dissertation: "Feel The Music" - Designed and created a tactile interface that generated musical experiences via sensory substitution for those with hearing impairments. 83/100

Modelling group projects: Modelling real-world situations and problems then presenting our system models and solutions through technical reports and presentations. Worked with 12 different teams on a range of projects from analysing the resilience of the London Underground to proposing an automatic system for unmanned gliders to detect air thermals.

Awards: Best Dissertation, Best poster, Top of year, Scholarship of achievement

Alton College, UK

2010 - 2012

A-levels: Art & Design A*, Mathematics A*, Further Mathematics A*, Physics A*

First in the UK for UKMT Team Maths Challenge, a nationwide competition, our team progressed to the EU finals in Italy.

previous

Human-Robot Interaction Internship

2014

Used Motion Capture technology (Qualisys) to investigate how kinetic robots should indicate their intended motion to humans in their physical vicinity. Funded by EPSRC in collaboration with Bristol Psychology and Engineering departments.

Quadruped Robot Scholarship

2015

Designed and fabricated a four-legged robot with an innovative gear system to replicate the four natural gaits of horses with one system. Funded by a Scholarship of Academic Achievement awarded to me by the University of Bristol.

Lloyds Banking Group Scholar Programme

2012 - 2016

The Lloyds Scholarship is a competitive programme supporting students at top UK Universities. It included two paid internships, multiple skills based workshops and 400 hours of volunteering in the local community.

Portfolio Management Intern, London

2013

Assisted the Portfolio Management team in Lloyds HQ for the first of two summer placements. Developed a new proposal system to assess portfolios and direct them to the correct team.

SME Scotland Intern, Edinburgh

2015

Worked with local businesses as part of SME Scotland. Built positive client relationships, learnt credit proposal processes, organised events and owned projects to improve colleague engagement and management systems.

skills

General

Mathematical modelling, teamwork, technical writing, design

Programming languages and software

Comfortable/currently using: Matlab, Microsoft Office Suite, Adobe Illustrator, Mac OS

Working knowledge: C, C++, Arduino, AutoCAD Inventor, 3D Printing with Makerbot, Adobe After Effects, Git, Linux

Self-taught: html, css, Processing

Final year course units

To demonstrate the level and diversity of my degree studies

Bio-Inspired AI: 90/100

Statistical Pattern Recognition: 83/100

Uncertainty Modelling: 88/100

Delay and Stochastic equations: 93/100

Control Theory: 83/100

Robotic Systems: 83/100

Advanced Nonlinear Dynamics: 80/100

volunteering

Student Robotics Assistant

2013 - 2014

A scheme across UK schools enabling teams to create robots for a nationwide competition, the aim being to encourage young adults to engage in Engineering. Role was to facilitate a local Bristol team with their build.

TEDxBristol Volunteer

2015

A local TED event showcasing inspiring projects by people and companies in Bristol. Role included assisting speakers and guiding guests.

Find out about the many other volunteering opportunities I have been involved in on my website.

interests

I enjoy new and diverse experiences leading me to have co-hosted a radio show, designed and built a play set, performed in an am-dram group and played in the University's female Canoe Polo team.

Fascinated by all forms of creative expression, I enjoy live music, films, talks and exhibitions, as well as exploring my own capabilities as an artist and creative coder. I love any outdoor activities such as climbing or cycling as well as building physical connections with people through dance (currently Cuban salsa) and acro yoga.

Read more on all topics at www.alicehaynes.com